

## CLAIMS

What is claimed is:

1. A caster wheel assembly for a wheeled device comprising:  
5 a housing suitable for connection to a wheeled device;  
a caster mounting assembly configured to mount a caster wheel for rotation;  
a caster bolt connected to the caster mounting assembly and inserted into the  
housing for rotation within the housing; and  
a damping insert applying a biasing force between the caster bolt and the  
10 housing to dampen the rotation of the caster bolt with respect to the housing.
2. The caster wheel assembly of claim 1 including upper and lower  
bearings and a cylindrical spacer positioned between the bearings, and wherein the  
biasing force between the caster bolt and the housing consists of applying the biasing  
15 force between the spacer and the housing.
3. The caster wheel assembly of claim 2 in which the damping insert is one  
or more discs positioned between the spacer and the housing.
- 20 4. The caster wheel assembly of claim 1 in which the damping insert is a  
circular disc.
5. The caster wheel assembly of claim 1 in which the damping insert is  
comprised of a polymeric material.  
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6. The caster wheel assembly of claim 1 in which the damping insert has a  
first stiffness along a first axis and a second, different stiffness along a second axis  
that is perpendicular to the first axis, thereby enabling the damping insert to be

inserted into the caster wheel assembly in either of two orientations, with the first orientation providing a first damping result and the second orientation providing a different damping result.

5           7.       The caster wheel assembly of claim 1 in which the damping insert is rectangular.

          8.       The caster wheel assembly of claim 1 in which the damping insert is readily removable and replaceable.

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          9.       The caster wheel assembly of claim 1 in which the caster mounting assembly is a caster fork.

          10.      A wheelchair having a frame, at least two drive wheels, and at least two  
15   caster wheels, each caster wheel being supported by a caster wheel assembly comprising:

          a housing suitable for connection to the wheelchair;

          a caster mounting assembly configured to mount a caster wheel for rotation;

          a caster bolt connected to the caster mounting assembly and inserted into the  
20   housing for rotation within the housing; and

          a damping insert applying a biasing force between the caster bolt and the housing to dampen the rotation of the caster bolt with respect to the housing.

          11.      The wheelchair of claim 10 wherein the caster wheel assembly includes  
25   upper and lower bearings and a cylindrical spacer positioned between the bearings, and wherein the biasing force between the caster bolt and the housing consists of applying the biasing force between the spacer and the housing.

12. The wheelchair of claim 10 in which the damping insert is one or more discs positioned between the spacer and the housing.

5 13. The wheelchair of claim 10 in which the damping insert is a circular disc.

14. The wheelchair of claim 10 in which the damping insert is comprised of a polymeric material.

10 15. The wheelchair of claim 10 in which the damping insert has a first stiffness along a first axis and a second, different stiffness along a second axis that is perpendicular to the first axis, thereby enabling the damping insert to be inserted into the caster wheel assembly in either of two orientations, with the first orientation providing a first damping result and the second orientation providing a different  
15 damping result.

16. The wheelchair of claim 10 in which the damping insert is rectangular.

17. The wheelchair of claim 10 in which the damping insert is readily  
20 removable and replaceable.

18. The wheelchair of claim 10 in which the caster mounting assembly is a caster fork.